GREEN JOBS and More

Trendlines

September/October 2011

Perspectives on Utah's Economy

INSIDE:
A National and Regional Green Jobs Assessment

Defining Green Jobs

PLUS TRAINING Opportunities for GREEN Careers

Department of Workforce Services

Trendlines

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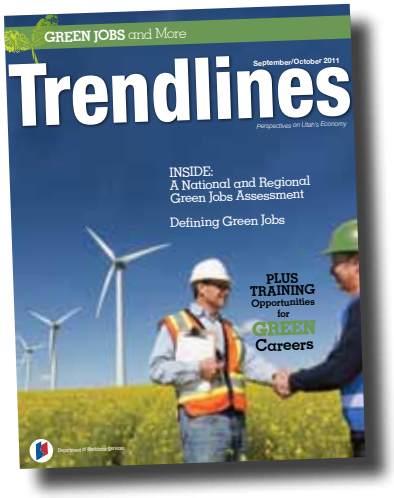

Green Jobs and More!

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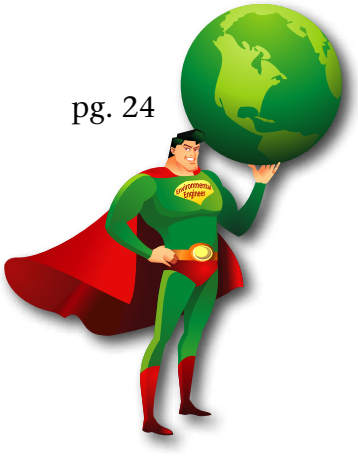

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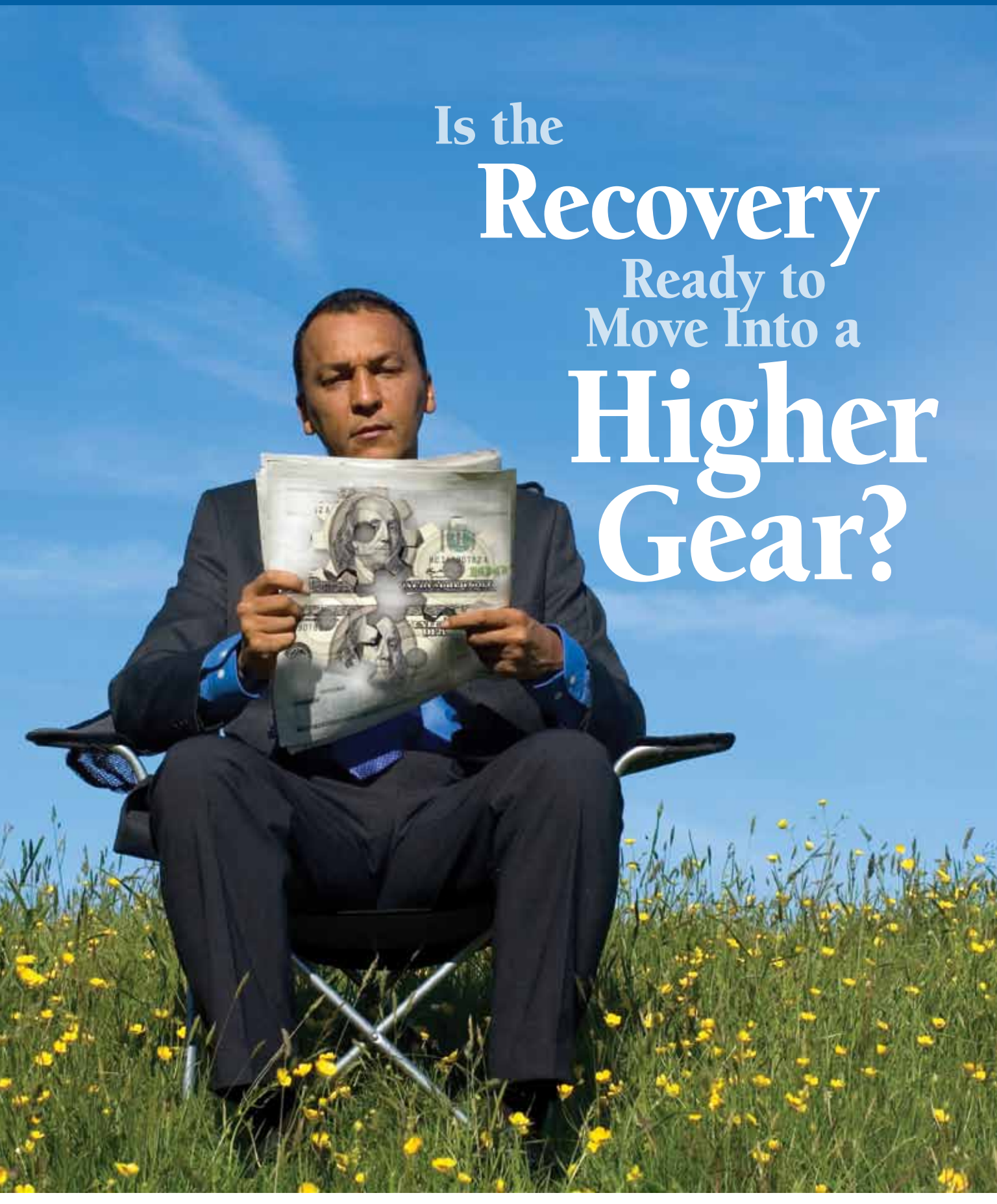
Is the Recovery Ready to Move Into a Higher Gear?



Let's highlight some good economic news for a change. Sure the economy is still struggling in Utah, but we need to acknowledge any good piece of news, especially when it is a key economic variable.

Utah's actual employment numbers are in for the first quarter and they came in better than the original survey estimates. Not by anything excessive, but an original 1.7 percent growth estimate is now revised up to 1.9 percent. The best part is that a shift may have occurred, portending a strengthening Utah employment trend. Let me explain.

Actual employment counts for a time period don't come in until further down the road, after most of the state's employers report their payroll counts into the state's unemployment insurance program. Unfortunately, it takes time for all of this data to accumulate and be processed. In the meantime, an employment survey is done every month to get a feel for what is happening—employment-wise—in a more current time frame. The actual, but lagged, employment numbers will eventually replace the survey's results.

With time, we see relational patterns emerge between the initial survey estimates and the lagged employment counts. When the actual employment counts are falling, the survey sees this fall, but it has a tendency not to catch the true depth of the decline. Conversely, when the employment picture reverses and improves, the survey estimates have a tendency to be lower than the actual employment counts that come in later. So the survey usually ends up chasing the fall and lagging the rise.

It is the shift in relationships for the first quarter that is most encouraging. For most of the past three years, as the employment counts fell, the survey was not capturing the complete depth of the job loss. Employment gains have now risen in Utah over the past year, but the survey stayed slightly ahead of those gains. But the first quarter data now puts the survey behind actual Utah job growth for the first time in many years, suggesting the Utah economy is starting to kick into a higher gear. Let's hope this continues and is not just a one-quarter anomaly.

Defining Green Jobs

In recent years, public policies nationally and internationally are increasingly focused on the need to transform economic activities to be sustainable, secure, and healthier. Economic activities—production, investment, infrastructure development, and research—that promote environmental health, conserve resources, and secure our energy future have been given the label "green."

Concepts and discussions of the green economy have been with us for many years, but attempts to understand its scope, size, and growth have been stymied by the lack of official government data on green industries, occupations, and employment. As various states, regions, and national organizations have struggled to measure the green economy in the recent past, the need for standard and comprehensive measurement of the green economy became clear.

Beginning in 2009, the U.S. Bureau of Labor Statistics (BLS) was given the assignment to develop a standard definition and procedure to measure green jobs. BLS defines green jobs as either:

A. Jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources.

B. Jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources.

U.S. FIRMS THAT PRODUCE GREEN GOODS OR SERVICES BY INDUSTRY
2009

	Number of Establishments	Percent Distribution
Natural Resources and Mining	88,700	4.1%
Construction	820,700	38.1%
Manufacturing	77,700	3.6%
Trade, Transportation, and Utilities	49,300	2.3%
Information	77,000	3.6%
Professional and Business Services	779,100	36.2%
Education and Health Services	26,400	1.2%
Other Services	183,300	8.5%
Government	42,100	2.0%
All Other Sectors	10,400	0.5%
Total	2,154,700	100%

Source: U.S. Bureau of Labor Statistics.

The U.S. Bureau of Labor Statistics is developing a standard definition to measure green jobs.

BLS determined it needed two approaches to measure green jobs. The output approach (Part A), identifies firms that sell green goods and services and counts the associated jobs. According to BLS, customers buy green goods and services that fall into five categories:

1. Energy from renewable sources.
2. Energy efficiency.
3. Pollution reduction and removal, greenhouse gas reduction, and recycling and reuse.
4. Natural resources conservation.
5. Environmental compliance, education and training, and public awareness.

The second method or the process approach (Part B), counts workers within firms that "research, develop, or use technologies and practices to lessen the environmental impact of their establishment", or train others "in these technologies and practices." BLS has identified four groups of green technologies and practices within firms for the process approach:

1. Energy from renewable sources.
2. Energy efficiency.
3. Pollution reduction and removal, green house gas reduction and recycling and reuse.
4. Natural resources conservation.

BLS will count green jobs and wages by detailed industries and occupations for the output approach (Part A) using two surveys, a new Green Goods and Services (GGS) survey and an enhanced version of the existing Occupational Employment Statistics (OES) survey. When a business establishment produces both green and non-green goods or services, jobs will be allocated as green using the share of total revenues from the green products sold. This allows for an equitable distribution of production, administrative, and management jobs among green and non-green products.

BLS is scheduled to publish its first green jobs statistics on national and state levels by industry and occupation from data collected during 2011 from the GGS and OES surveys in the spring 2012 and annually thereafter.

For the process approach (Part B), measuring green jobs related to the use of environmentally friendly production within an establishment, BLS is developing a special employer survey to be administered during the summer of this year with a planned release in the summer of 2012. This data will be employment and wages by occupations for the Nation and Census Regions (no state breakout).

For additional information on measuring green jobs from BLS go to http://www.bls.gov/green/

Is Utah's Employment Grass

Greening Up?

A quick look at "green job" projections

With the results of the Department of Workforce Services' first attempt at studying Utah's "green" jobs firmly in hand (see the article on page 12), we took the next logical step. We've developed green job projections. This process entailed combining our green jobs research with our long-term occupational projections for 2008-2018. Yes, I know it is 2011! But don't think these projections are meaningless. Occupational projections are produced on a two year cycle after the U.S. projections are complete. It's a very time-consuming process, and we're just gearing up to do the next set. Plus, I've been in the occupational-projection business a long time—the trends change very, very slowly. So, here's what we expect in the next several years.

Often these green-related emerging occupations don't have their own classification yet, although new classifications should be forthcoming.

More Openings

Green jobs should grow at an annual rate of approximately 2 percent a year—about the same expansion rate as total employment. When we add the need for replacements to growth in green jobs, Utah can expect an average of 1,100 openings per year for green-related jobs—about half from growth; half from replacement needs. Seems like a lot? Well, keep in mind that we expect a total annual average of 64,000 Utah openings per year during the projection period. On the other hand, green jobs are expected to comprise more than 3 percent of total openings compared to less than 2 percent of current employment.

Blue and White are Green

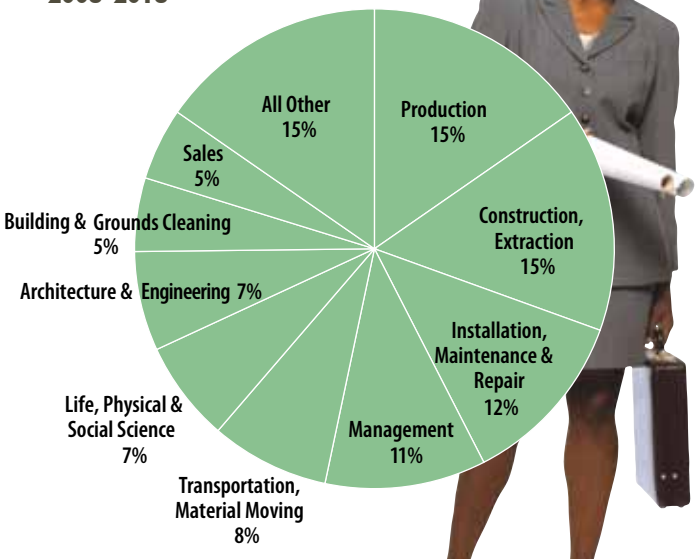
Which major occupational groups should create the most green-job openings? Well, in this case green-collar openings are primarily blue-collar openings. Half of all green-openings should occur in just four blue-collar occupational categories—production (manufacturing), construction/mining, installation/maintenance /repair, and transportation/material moving. Projections indicate another quarter of these new openings will occur in occupational groups that typically require a bachelor's degree or higher (white collar)—management, life/physical/social sciences, and architecture/engineering.

Down to the Individual

Which individual occupations should provide the most green-related openings? Again, the green answer seems more blue-collar than white- or pink-collar. In addition, two "residual" or "all other" occupational categories show up high on the list. Why? Because many green professions are emerging occupations, they don't yet have their own classification in the occupational coding structure. Often these emerging occupations must be categorized in the "all other" groups. (Fortunately, the latest revision of the Standard Occupational Classification system includes many "new" green occupation classifications, so more-detailed data should be forthcoming.) Interestingly, both retail salespersons and heavy truck drivers made the list.

Share of Utah Projected GREEN Jobs by Major Occupational Group 2008-2018

Jobs in the production and construction industries are projected to create the most green jobs through 2018.



Utah Occupations with the Most Projected GREEN Openings • 2008-2018

Heating/Air Conditioning/ Refrigeration Mechanics/Installers	60
Production Workers, All Other	50
Electricians	30
Managers, All Other	30
Retail Salespersons	30
Laborers and Freight/Stock/Material Movers	30
Refuse and Recyclable Material Collectors	30
Water/Liquid Waste Treatment Plant/ System Operators	30
Maintenance and Repair Workers, General	20
Landscaping and Groundskeeping Workers	20
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	20
Forest and Conservation Technicians	20
Plumbers, Pipefitters, and Steamfitters	20
Truck Drivers, Heavy	20

Source: Utah Department of Workforce Services.

TRAINING OPPORTUNITIES for Green Careers

Utah is emphasizing four green career sectors:

1. **alternative fuels**
2. **energy management**
3. **green construction**
4. **renewable energy production and transmission.**

Green careers are critical to Utah's continued quality of life and in diversifying Utah's vibrant economy. Data from Utah's Green Jobs Survey approximated 1,100 green job openings per year—which accounts for 3.3 percent of all total job openings. (For more information on green occupational projections, see the article on page 8.)

In January 2010, the Utah Department of Workforce Services (DWS) was awarded a $4.6 million State Energy Sector Partnership (SESP) grant by the US Department of Labor, Employment and Training Administration. The grant's purpose is to support state's roles in building a national green economy.

The project will provide no-cost training to 1,400 individuals who can obtain skills required to work in emerging energy efficiency and renewable energy industries. Training started in January 2011 and will be provided through July 31, 2012. Currently 202 participants are enrolled in training courses. The chart at the right identifies SESP training institutions and their respective curriculum.

Training participants work with Energy Career Development Specialists located at the schools who determine their individual needs and eligibility for the program. The specialists also coordinate with the schools to develop class schedules and materials needed for classes and assist with job placement upon completion.

The average class length is six months and participants initially complete core training that provides the foundational skills needed for any of the specific training areas. Core training includes energy essentials, computer skills, applied math, technical writing,

STATE CORE ENERGY CURRICULUM

Technical Foundations and Integrated Skill Sets

Statewide Energy Management/Efficiency and Renewable Energies

Energy Essentials	Computer Skills	Applied Math	Safety Regulations	Technical Writing
Essentials	All participants will complete common "core" training in addition to a "specialty" program. This will provide the integrated foundational skills needed to cross over in to any of the specific training areas. This will allow individuals to move in and out of occupations/ sectors as the market changes.		OSHA	
Processing			First Aid + CPR	
Energy Essentials				

and safety regulations. Upon completion of the core training, every participant will obtain OSHA and First Aid/CPR certifications. In the near future, core training courses will be available online.

Success Story #1: a Box Elder County participant owns a repair shop and wanted to add CNG (Compressed Natural Gas) installation to his existing services. Not only did the training (CNG certification) increase his business revenue but the school asked him to become a CNG instructor--win for the participant and win for the program.

Success Story #2: This summer, Utah State University-Workforce Education Division and SESP partnered to teach Navajo youth building skills. This collaboration made it possible for the DWS Youth Employment Program to reach students in the remote location of Monument Valley and made it feasible for SESP to offer the course outside of the regular school year. The program provided youth with an internship opportunity building octagons, which is a version of the traditional Navajo hogan. Participants gained valuable work experience in addition to high school credit.

Upon completion of the program, training participants will have the potential to improve their earnings and be marketable in an energy sector career, obtain employment in an energy sector occupation or maintain/ retain employment in their current position. To find out if you may be eligible for the no-cost training, go to jobs.utah.gov and click on the State Energy Sector Partnership Grant link or contact Melisa Stark, DWS Program Specialist (801) 628-4051, mstark@utah.gov or Kelly Thornton, DWS Program Specialist (435) 719-2630 kthornto@utah.gov.

State of Utah Green Jobs Survey Revisited

Major Findings

Nearly 6,000 Utah businesses were found to be involved in green activities

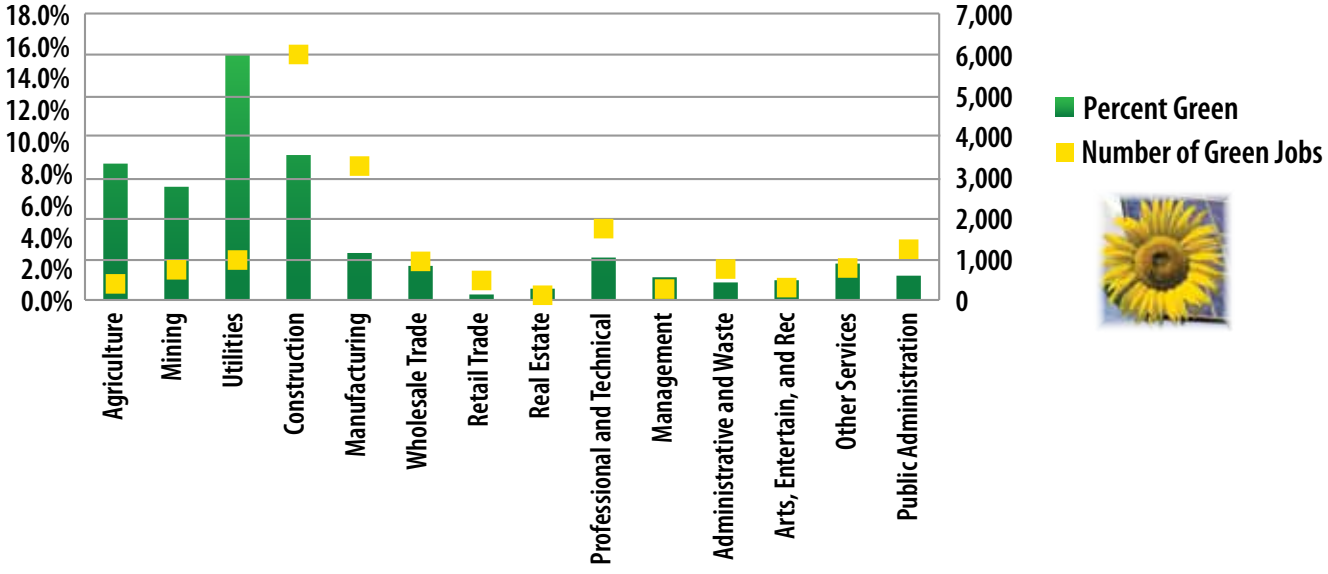
Trendlines readers might remember the article entitled 'State of Utah Green Jobs Survey' published in our January/February 2011 issue, which detailed the Department of Workforce Services' (DWS) effort to measure the incidence and prevalence of green jobs in Utah. That article can be referenced for a detailed overview of survey methodology and our definition of 'green'. Otherwise, a few elements of the DWS Green Jobs Survey that will aid in the consumption of this article are as follows: as part of the Rocky Mountain Northern Plains green job consortium, DWS administered a Green Jobs survey to over 11,000 Utah establishments during the 2nd quarter of 2010. Employers across all industries, size classes and state geographies were surveyed, and activities belonging to six green economic categories were captured.

Nearly 6,000 Utah businesses were found to be involved in green activities during the survey period. Of those, it is estimated that almost half were operating to promote products or services that increase energy efficiency or the conservation of energy. The remaining green economic categories witnessed relatively equal representation, as can be seen in Figure 1.

Figure 1: Green Economic Category	Percent of Green Businesses
Energy Efficiency	49.2%
Sustainable Agriculture	11.1%
Renewable Energy	10.4%
Environmental Cleanup	10.0%
Education and Regulation	9.7%
Pollution Prevention and Reduction	9.6%

In terms of green employment, there were 22,270 green jobs in Utah, 6,000 of which were found in the construction industry. The manufacturing and professional and technical industries followed with 3,272 and 1,743 green jobs, respectively. Other industries, while not possessing the same levels of total green jobs, had high concentrations of green employment relative to their total industry employment. 15.4 percent of the utility industry's employment was green, with agriculture at an 8.6 percent concentration and mining at 7.1 percent.

Figure 2: Utah Green Industry Statistics



In many ways, it was not surprising to discover which industries most represented green jobs in terms of total job counts and relative employment percentages, since some of the green economic activities within our definition are especially prevalent in particular industries. For example, jobs having to do with energy efficiency and conservation, such as HVAC technicians and solar panel installers, are frequently found in the construction industry. Likewise, energy efficiency activities are often undertaken by companies in the utilities industry, technologies in cleaner oil extraction and environmental clean-up are being more commonly utilized in the mining industry and consumer demand continues to influence the proliferation of sustainable agriculture practices.

If nothing else, the green jobs survey has demonstrated that green jobs do exist in Utah, as well as the related opportunities for Utah's workforce. As market mechanisms increasingly incentivize green economic behaviors, Utahns can continue to expect opportunities in the field of green.

Unemployment & Underutilization of Labor

The Unemployment Rate isn't the only way to measure the state of the economy.

The U.S. Department of Labor, Bureau of Labor Statistics (BLS) is the "keeper" of the unemployment statistics. It's their job to provide the nation with the numbers profiling the workforce. The public, politicians, businesses, and policy makers often look to a single statistic—the unemployment rate—to provide them with a measure of the economic "misery" in the country. It's not the only measure that describes the state of the economy, but it's the one that seems to get the most play.

The unemployment rate is a measure of how connected—or disconnected—the workforce is to the job market. It is derived by dividing the number of unemployed persons by the total civilian labor force (CLF). The civilian labor force includes persons 16 years of age and older who are working (employed) or looking for work (unemployed). The proportion of the civilian labor force that is looking for work becomes the unemployment rate.

BLS also publishes "Alternative Measures of Labor Underutilization."[1] These look at labor force participation and labor utilization through increasing stages of discernment. Six ascending measures of labor underutilization emerge, labeled U-1 through U-6 (see box for definitions). With each successive step, additional and more liberal criteria are added. These alternative criteria are measured through the Census Bureau's monthly Current Population Survey (CPS, or commonly called the Household Survey). Results are compiled and released by BLS. The

closest measure to the official unemployment rate is the U-3 rate, it being "total unemployed as a percent of the civilian labor force.[2]

Discouraged workers, added to the U-3 measure in the U-4 step, are persons who are not looking for a job but would take a job if they felt they could find one. They also had looked for a job sometime in the prior 12 months. They are not counted as officially unemployed because they had not searched for work in the prior four weeks, for the specific reason that they believed no jobs were available for them.

U-5 goes one step further and adds in marginally-attached workers, meaning people of U-4 characterization who have cited any other reason for not looking for work in the past four weeks than discouragement.

U-6 completes the pyramid. It actually includes people who are working, but only working part-time (less than 35 hours per week) for economic reasons (not their own choice) yet who desire and are available to work more hours. These individuals are sometimes referred to as involuntary part-time workers. This U-6 criterion is designed to capture the broadest extent of labor underutilization.

U-6 is often referenced in the press and national stories because it is looked upon as the complete story surrounding labor. It is also more sensational. This U-6 rate is not only inherently the highest, but is noticeably higher in economic recessions than in other phases of the business cycle. In effect the U-6 rate expands the scope of labor underutilization to include those that have given up looking for work and those that want to work more hours but are employed part-time.

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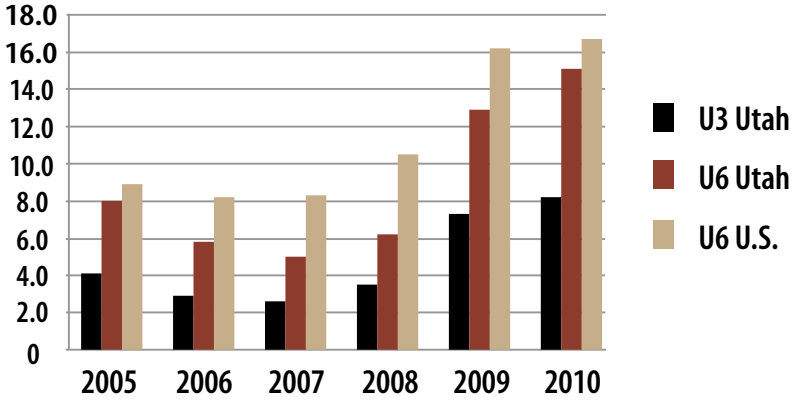
Unemployment & the Highest Level of Labor Underutilization
U.S. and Utah 2005-2010



Alternative Measures of Labor Underutilization

- U-1, persons unemployed 15 weeks or longer, as a percent of the civilian labor force;
- U-2, job losers and persons who completed temporary jobs, as a percent of the civilian labor force;
- U-3, total unemployed, as a percent of the civilian labor force (this is the definition used for the official unemployment rate);
- U-4, total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers;
- U-5, total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percent of the civilian labor force plus all marginally attached workers; and
- U-6, total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Utah Labor Underutilization compared to the U.S.

In 2003, BLS started measuring these six levels for each state. Data are available quarterly, covering the most recent four quarters. An annual estimate is also produced.[3]

Let's place these measures in the context of the current economic/business cycle by providing some history. We'll use the unemployment rate (U-3) and the U-6 underutilization rate. The economy was in strong growth mode after the 2002 "Dot Com" recession, growing steadily through mid-decade, peaking in November 2007. Annual unemployment rates in 2007 reflected the high-flying economy, with U.S. unemployment at 4.6 percent and Utah at 2.6 percent. At that time the U-6 underutilization rate was 8.3 percent for the country and 5.0 percent for Utah.

Both the national and Utah economies fell into recession thereafter. From 2008 to 2010, the national unemployment rate jumped from 5.8 percent to 9.6 percent. Utah's jobless rate also rose significantly, more than doubling from 3.5 percent in 2008 to 8.2 percent by 2010. Even more dramatic and reflective was the change in U-6 underutilization rates. The U-6 rates quickly climbed into double-digits. At the national level the 2010 U-6 reached 16.7 percent. Utah's U-6 was nearly as high at 15.1 percent. To jog your memory, the unemployment rate for the U.S. and Utah in 2010 was 9.6 percent and 8.2 percent, respectively. These underutilization rates are high and could remain high for the next few years, even as the economy moves forward with recovery.

The rates for states hardest hit by the recession are much higher than Utah's. For example, in 2010 the highest U-6 rates were for Nevada (23.6 percent), California (22.1 percent), Michigan (21.0 percent), and Oregon (20.0 percent).

The underutilization rates are informative measures of the economic environment and the stress placed upon the labor force. Understanding these various measures and what they portray add depth to the picture of labor underutilization in America.

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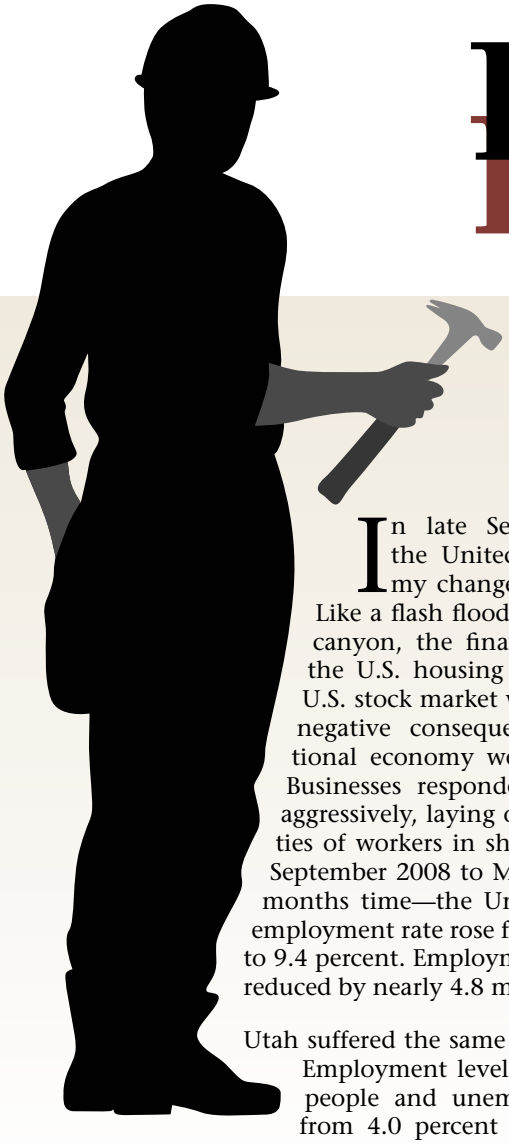
[1] http://www.bls.gov/lau/stalt.htm

[2] Note that the unemployment rates (U-3) that are shown are derived directly from the CPS (quarterly summations). Most state and local unemployment rates (monthly summations) add other variables to the equation to strengthen the unemployment measure. As a result, these U-3 measures may differ from the official state unemployment rates for the same period.

[3] The annual rate is the one shown in the graph.

Nevada, California, Michigan and Oregon were all hit harder by the recession than Utah.

*with programming contribution from Michelle Beebe



Profiling the Recession Upon Classes Within the Labor Force

In late September 2008, the United States economy changed dramatically. Like a flash flood rolling down a canyon, the financial fallout of the U.S. housing bubble hit the U.S. stock market with substantial negative consequences. The national economy went into shock. Businesses responded rapidly and aggressively, laying off large quantities of workers in short order. From September 2008 to May 2009—eight months time—the United States unemployment rate rose from 6.2 percent to 9.4 percent. Employment levels were reduced by nearly 4.8 million workers.

Utah suffered the same type of impact. Employment levels fell by 30,000 people and unemployment rose from 4.0 percent to 7.1 percent. The consequences of this financial fallout continued to ripple through both the U.S. and Utah economies for several more years, and even now its consequences are both evident and influential, although some minor employment rebounding has occurred.

Large quantities of workers suddenly found themselves unemployed. Who were these people, and what were their profiles and characteristics? That is the subject of this article.

About 30 percent of the people who are counted as unemployed actually file for unemployment insurance benefits in Utah (slightly lower than the national percentage of filers). As that benefit program is administered by the Department of Workforce Services, we can aggregate this unemployment-filing information. This provides a picture of at least a segment of those who are unemployed, i.e., those who file for unemployment insurance benefits. It is assumed that the profile of this group of unemployed is representative of the greater picture of all unemployed workers in Utah.

Unemployment insurance claim levels exploded beginning in October 2008. Those having an active unemployment insurance claim rose from 13,400 in September 2008, to 44,000 by March 2009.[1] Before and after snapshots can be profiled upon the unemployment insurance claimants to see how various gender, educational, and social-economic labor-force cohorts surface within the unemployment insurance system, and how they were impacted by the recession. To do this, pre-recession trends and patterns are established. Then those patterns are evaluated as the recession unfolds, and what is looked for are noticeable deviations from the long-term pattern. When those deviations are seen, then immediate impacts from the recession are assumed.

From this, several impacts stand out:

—The recession hit males particularly hard. Male percentage of all unemployment claims went from 55 percent before the crash to 70 percent shortly thereafter.

This increase is the result of two industries that were hit particularly hard during the recession—

continued on page 18

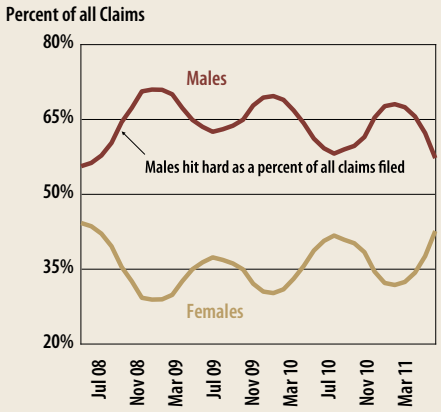
construction and manufacturing (these two industries accounted for half of all the jobs lost during the recession). These industries are heavily dominated by male workers, so the natural outcome would be that male workers would suddenly show a surge in unemployment filings when these industries contracted workers.

—The recession impacted younger workers more forcefully than older workers.

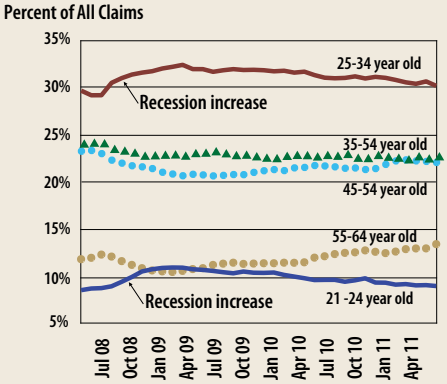
This makes sense from the standpoint of historical observation as to how choices are made when workers are laid off. In a broad sense, it is oftentimes younger, less experienced workers who are the first to be laid off. Older workers usually carry more tenure and institutional knowledge with them (thus better skills), and therefore businesses are more apt to keep their higher-skilled workers. They calculate that lesser- skilled workers will be both easier and cheaper to replace once the economy picks back up.

—Low education levels generally characterize the majority of the unemployment claimants, and there was an initial additional impact upon low education level workers, but it did not remain sustained throughout the recession period.

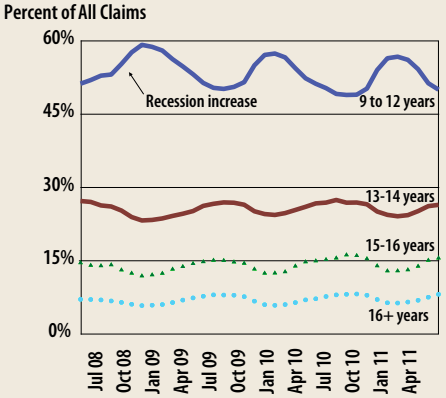
This works somewhat in concert with the previous observation about younger workers, as younger work-



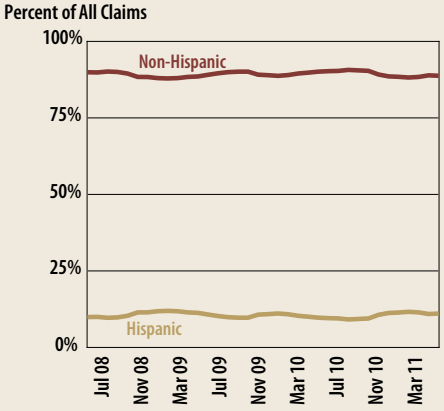
Utah Unemployment Insurance Ongoing Claims
Males and Females
September 2008 through June 2011



Utah Unemployment Insurance Claimants
By Age Groupings
September 2008 through June 2011



Utah Unemployment Insurance Claimants
By Years of Education
September 2008 through June 2011



Utah Unemployment Insurance Ongoing Claims
Hispanic and Non-Hispanic
September 2008 through June 2011

Source: Utah Department of Workforce Services; Unemployment Insurance Filing, Continued Claims

Younger workers and workers living in outlying areas of the Salt Lake valley were harder hit.

ers may not have had enough time yet to expand their education tenure. Even when there is no recession, lower educated workers are the ones more often to appear within the unemployed ranks. Workers with 9 to 12 years of education make up about 50 percent of all unemployment insurance claimants. This rose to almost 60 percent during the initial job-loss phase of the recession, but thereafter settled back down to its more long-term level around 50 percent. This was probably the result of either them running out of unemployment benefits, or possibly moving on to the federal-government extended benefit ranks (extended benefits were not quantified in this analysis).

—Non-Hispanics make up around 90 percent of all unemployment benefit filers. Hispanics make up the other 10 percent (Hispanics make up around 10 percent of Utah's labor force). There was no noticeable change in this relationship during the recession.

—There was one additional effect that emerged from these unemployment filers. It was the location and concentration of where these unemployment filers lived.

While unemployment claims rose all over the state, certain census tracts stood out with the highest quantity of filers. Away from the Wasatch Front the highest filings were in Washington County, which turned out to be one of the most impacted areas in the state, with its housing bubble very much resembling what happened in the hard-hit Las Vegas area.

But along the Wasatch Front, the areas with the highest filers were the southwest corner of Salt Lake County, northeastern Utah County, and the areas of eastern Tooele County outside of Tooele City and Grantsville. These areas are what some from the real estate world describe as "drive-till-you-qualify" areas.

As the Salt Lake County area has populated over the past several decades, land and housing prices have risen as those commodities became more precious. For many young, first-time home buyers employed in the Salt Lake area, it became necessary to drive further to find affordable land and home pricing. This took many young workers into the Bluffdale and Herriman areas in southern Salt Lake County, Lehi, Saratoga Springs, and Eagle Mountain in northern Utah County, and around the Oquirrh Mountains to the eastern reaches of Tooele County. In concert with the above observations of younger workers being more readily unemployed, it shouldn't come as a surprise that the areas with the highest concentrations of those filing for unemployment benefits are found in these just-mentioned geographic areas.

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[1] Mirroring federal government statistical reporting procedures, monthly snapshots are taken for one week each month, generally being the week that includes the 12th day of the month.

A National & Regional **Green Jobs**

Many business and political leaders see an expansive "green economy" in the U.S. as fundamental to a sustainable and secure economic future.

While interest in understanding the green economy has been high in recent years, it has been problematic to define, isolate, and count. Currently, there is no national green database with standard industry and occupational classifications across states, regions, and metropolitan areas. The numerous green jobs and green economy studies done in recent years have somewhat different definitions and methodologies that have prevented suitable regional and state comparisons.

To address these data and definitional shortcomings, the Metropolitan Policy Program at The Brookings Institution in association with Battelle Technology Partnership Practice (Brookings/Battelle), developed a database at the establishment level for every county in the U.S. covering the years 2003 to 2010. This database has enabled Brookings/Battelle to produce a study—Sizing the Clean Economy, A National

Clean Economy Jobs by State: 2003 and 2010

Source: Brookings-Battelle Clean Economy Database.

	2003 Green Jobs	2010 Green Jobs	Average Annual Growth 2003 to 2010	Share of Total 2010 Jobs
Alabama	32,592	38,182	2.3%	1.9%
Alaska	8,439	16,682	10.2%	4.7%
Arizona	29,896	37,257	3.2%	1.5%
Arkansas	27,920	32,450	2.2%	2.6%
California	239,064	318,156	4.2%	2.1%
Colorado	34,787	51,036	5.6%	2.2%
Connecticut	22,541	29,751	4.0%	1.8%
Delaware	4,873	6,917	5.1%	1.6%
Dist of Columbia	20,302	22,462	1.5%	3.1%
Florida	74,669	102,967	4.7%	1.4%
Georgia	64,709	83,707	3.7%	2.1%
Hawaii	7,144	11,113	6.5%	1.7%
Idaho	12,992	17,543	4.4%	2.7%
Illinois	86,084	106,375	3.1%	1.8%
Indiana	48,352	53,684	1.5%	1.9%
Iowa	24,574	30,835	3.3%	2.0%
Kansas	22,179	27,199	3.0%	1.9%
Kentucky	32,011	36,963	2.1%	1.9%
Louisiana	28,468	28,673	0.1%	1.5%
Maine	9,298	12,212	4.0%	2.0%
Maryland	34,837	43,207	3.1%	1.7%
Massachusetts	50,598	63,523	3.3%	2.0%
Michigan	78,537	76,941	-0.3%	1.9%
Minnesota	41,752	58,232	4.9%	2.1%
Mississippi	17,730	20,905	2.4%	1.8%
Missouri	36,496	43,736	2.6%	1.6%
Montana	11,850	14,235	2.7%	3.1%
Nebraska	10,286	15,311	5.8%	1.5%
Nevada	11,167	16,578	5.8%	1.5%
Newh Hampshire	8,971	12,886	5.3%	2.0%
New Jersey	68,127	94,241	4.7%	2.4%
New Mexico	11,818	17,725	6.0%	2.1%
New York	124,848	185,038	5.8%	2.1%
North Carolina	52,780	78,881	5.9%	1.9%
North Dakota	4,537	7,146	6.7%	1.7%
Ohio	88,513	105,306	2.5%	2.0%
Oklahoma	13,903	19,297	4.8%	1.2%
Oregon	50,482	58,735	2.2%	3.4%
Pennsylvania	99,334	118,686	2.6%	2.1%
Rhode Island	9,017	9,563	0.8%	2.0%
South Carolina	46,659	50,424	1.1%	2.7%
South Dakota	5,459	6,659	2.9%	1.5%
Tennessee	58,456	76,031	3.8%	2.8%
Texas	115,194	144,081	3.2%	1.3%
Utah	14,312	18,261	3.5%	1.5%
Vermont	8,295	9,425	1.8%	3.0%
Virginia	48,423	66,772	4.7%	1.7%
Washington	69,106	83,676	2.8%	2.8%
West Virginia	10,587	12,659	2.6%	1.6%
Wisconsin	73,093	76,858	0.7%	2.7%
Wyoming	4,147	6,363	6.3%	2.1%
United States	2,110,208	2,675,545	3.4%	2.0%

Assessment

A timely analysis of green jobs for all states, the District of Columbia, and the 100 largest metropolitan areas.

and Regional Green Jobs Assessment. This study provides timely major industry and occupational green jobs analysis for all states, the District of Columbia, and for the 100 largest metropolitan areas in the U.S.

Recognizing that there has been to date, no consensus on a definition of the green economy, Brookings/Battelle aligned its study with well-established guidelines using "rules that are simple, internally consistent, transparent, and replicable." The basic green economy definition used in this study is:

"The clean economy is economic activity—measured in terms of establishments and the jobs associated with them—that produces goods and services with an environmental benefit or adds value to such products using skills or technologies that are uniquely applied to those products."

The last part of this definition concerns firms that add value to clean products—seeking to capture the green supply chain, that is, companies that provide materials or inputs to the final green products.

Following are some data and conclusions resulting from the analysis:

- The clean economy employs 2.7 million workers in the U.S. spread across a diverse group of industries, accounting for 2 percent of all jobs.
- The West has the largest share of clean economy jobs relative to its population.
- Recent clean economy job growth is concentrated within the largest metro areas.
- The clean economy is manufacturing and export intensive. Manufacturing accounts for about 26 percent of all clean jobs, while overall manufacturing comprises 9 percent of total U.S. employment.
- Industry clusters enhance metropolitan clean economy performance. Clustering involves the proximity of similar and related businesses.
- Green jobs provide better pay to low- and middle-skilled workers than does the economy as a whole.
- The study counted 14,312 green jobs in 2003 and 18,261 in 2010 for Utah. The Utah average annual green jobs growth rate over those seven years was 3.5 percent, just above the 3.4 percent growth rate nationally.

One theme of the Brookings/Battelle study concerns global competition in green technology. International competition is already quite keen as countries such as China, Germany, Japan, and the United Kingdom are engaging in a "race to clean" by making new and ongoing investments in the environmental goods sector a source of quality jobs, exports, and growth.

Likewise the green economy is seen as a potential source of future U.S. high-quality job growth. The analysis suggests that the emergence of clean jobs is relevant to the renewal of the national economic base, with some green segments as critical to future economic growth. Evidence also supports the notion that some national policy lapses have left domestic green demand weaker than it could be, financing harder to obtain, and the innovation pipeline less secure.

More information on the report:

Sizing the Clean Economy, A National and Regional Green Jobs Assessment is available at http://www.brookings.edu/metro/Clean_Economy.aspx.

fyi

by lecia parks langston, economist

The "Other" Unemployment Rate—Utah's Insured Unemployment Rate Provides Economic Insights

Seventy percent of the "unemployed" are not receiving unemployment benefits. Find out why.

Most people are somewhat familiar with the unemployment rates that are published by the Bureau of Labor Statistics. These unemployment rates cover the entire labor force (total unemployment rate or TUR). Nationally, household surveys reveal the jobless rate. Monthly unemployment rates for Utah are a hybrid of modeled data and survey data. On a county level, jobless rates are estimated using other sources of data—the national survey isn't large enough to provide rates for individual counties. The public likes to track unemployment rates—even though they are far from the best indicators of economic well-being. Maybe it's just human nature to focus on the negative.

There is another unemployment rate that is based on hard numbers—not a survey. However, the little-known insured unemployment rate (IUR) rarely sees the media light of day. The insured unemployment rate is calculated by dividing the number of individuals making a weekly claim for unemployment insurance benefits by the number of jobs covered by unemployment insurance laws (covered employment). These figures will not include noncovered agriculture, the self-employed, folks who haven't worked long enough to establish a claim, etc.

Now, there's a misconception out there that only claimants for unemployment insurance benefits are counted in the total unemployment rate (TUR). Not true. The "recipiency rate"—or share of the total unemployed receiving unemployment insurance benefits—typically measures just less than 30 percent in Utah. In other words, 70 percent of the "unemployed" are not receiving unemployment benefits. Why? These individuals didn't work long enough to qualify for benefits, they've been out of the labor force for several years, they've never had a job, their job wasn't covered by unemployment insurance laws, they were self-employed, or they just didn't file for benefits.

So why might you be interested in the insured unemployment rate? First, it is based on hard numbers rather than estimates or surveys. Second, it is available a week rather than a month after the fact. Third, it can act as a precursor for changes in the total unemployment rate. Fourth, with their strong attachment and history in the labor force, these individuals typically represent the core of the labor force. Finally, it is easy to calculate insured unemployment rates by county and industry.

On the other hand, it has its drawbacks. It only includes 30 percent of the unemployed and it excludes those on extended benefit

for your in

programs. Plus, because of the lack of interest, we've yet to seasonally adjust the data.

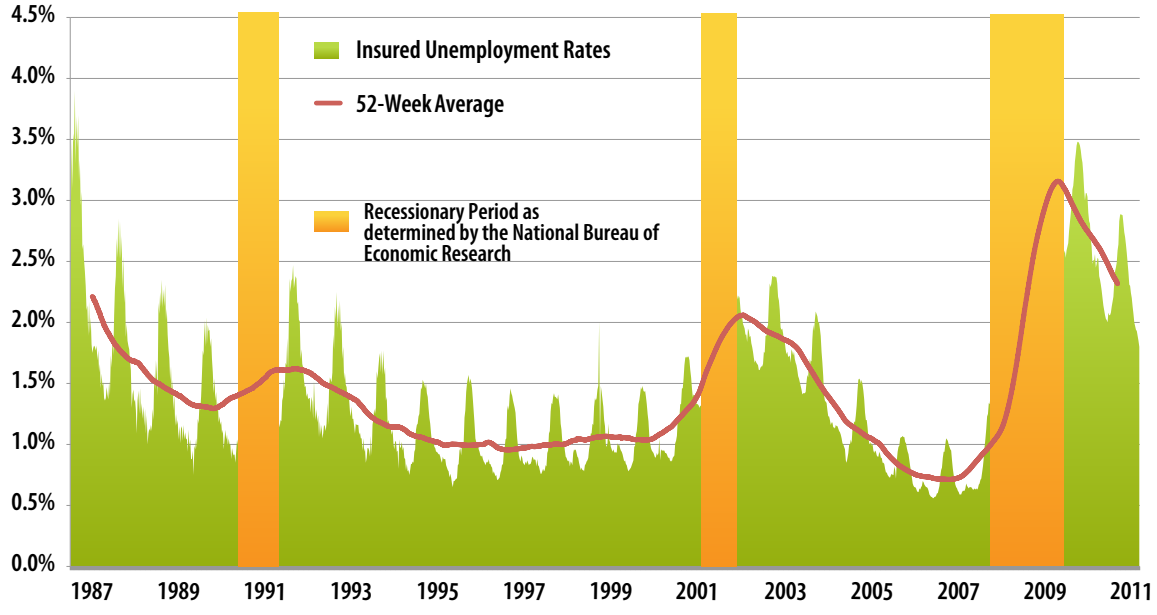
What can we learn from Utah's insured unemployment rate? The insured unemployment rate (IUR) registers much, much lower than the total unemployment rate (TUR). In May 2011, the average IUR measured 2.0 percent compared to a TUR of 7.3 percent.

The unadjusted rate shows a very strong seasonal pattern. The IUR typically hits its peak in the last week of January or the first week in February—recession or boom.

The highest Utah IUR of the past thirty years did not occur during the so-called "great recession." Utah posted its highest IUR (3.9 percent) in February of 1987. The peak of the IUR's centered 52-week moving average roughly coincides with the end of a recession.

For more information on Utah's insured unemployment rate, go to http://workforcesecurity.doleta.gov/unemploy/claims.asp

Utah Insured Unemployment Rate



Source: U.S. Department of Labor.

formation

ENVIRONMENTAL ENGINEER: SAVING THE EARTH

Global warming. Toxic waste. Air and water pollution. All of these terms and their potentially devastating results are believed to be human-caused. That's right: lay the responsibility squarely at our feet for declining animal populations and their habitats, filthy air, and gargantuan landfills, and that's just the tip of the iceberg, pun intended. If all of us are guilty, to varying degrees, for "fouling our nest", is there anyone out there willing to try to save humanity and the Earth from us? Where is a super-hero when we need one?

In the case of the environment and our negative impact on it, the super-hero just may be called an environmental engineer. The Standard Occupational Classification Manual states that environmental engineers "research, design, plan, or perform engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology".

In the recent Green Jobs Survey conducted by Utah and five of its neighboring states, environmental engineer emerged as a "green job" meaning it is a work activity:

> *"that promotes products or services that improve energy efficiency, expands the use of renewable energy, or supports environmental sustainability."*

Recent articles about environmental engineers illustrate just how innovative they can be when they attempt to save us from ourselves. Engineers have published the first poplar tree DNA code which may have possibilities for sustainable energy; a software program has been developed for managing pollutants from storm water runoff; a General Motor's engineer heads a program that repurposes scrap

cardboard in to sound absorption material for cars. Now that's thinking out of the box, isn't it?

How does one get to be a super-hero, excuse me, environmental engineer? An entry-level job requires at least a bachelor's degree. Most engineering programs involve a concentration of study in an engineering specialty, plus courses in mathematics, physical and life sciences. Engineers offering their services to the public must be licensed. Graduate-level training is mandatory for engineering faculty positions and some research and development programs. Many engineers pursue graduate degrees to learn new technologies and broaden their skills.

The occupation of environmental engineer is expected to have employment growth much faster than the average for all occupations. They will be needed to help companies comply with environmental regulations and to develop methods of cleaning up environmental hazards. A paradigm shift—preventing problems from occurring rather than controlling those that already exist--should increase demand for environmental engineers.

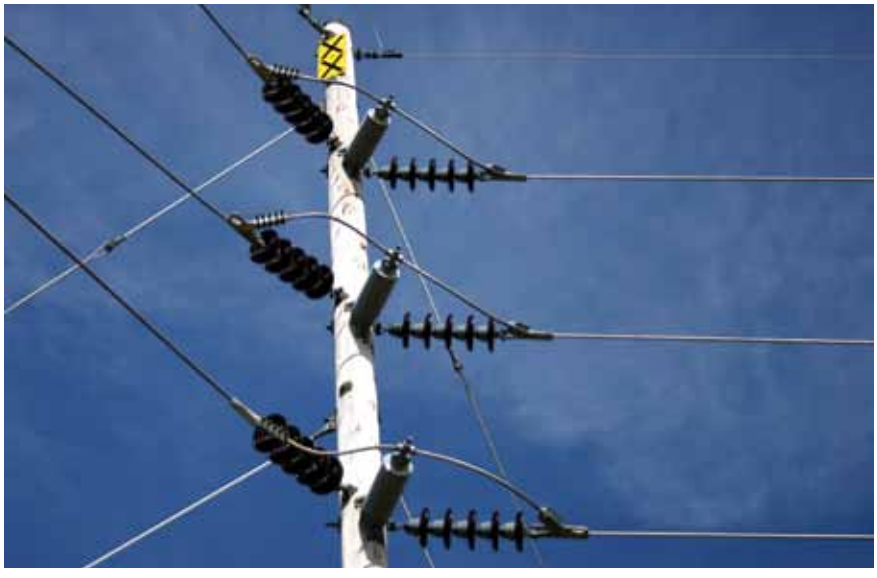
Occupational Wages-Published June 2011 (data from May 2010) for Environmental Engineers

Area Name	Hourly Inexperienced	Hourly Median	Annual Inexperienced	Annual Median	Training Level
Eastern	$31.87	$38.66	$66,290	$80,400	Bachelor's degree
Logan MSA	$26.06	$35.32	$54,200	$73,470	Bachelor's degree
Ogden-Clearfield MSA	$33.69	$44.34	$70,080	$92,230	Bachelor's degree
Salt Lake City MSA	$27.92	$38.82	$58,080	$80,740	Bachelor's degree
United States	—	$37.04	—	$77,040	Bachelor's degree
Utah	$28.32	$39.52	$58,910	$82,200	Bachelor's degree

Resources:

- http://bls.gov
- http://jobs.utah.gov/jsp/wi/utalmis/gotoOccinfo.do
- American Academy of Environmental Engineers
- Association of Environmental Engineering and Science Professors

Utilities



Utah Utilities Industry Quick Facts • 2010

Private Sector	
Employment	4,065
Share of Total Private Employment	0.4%
2009-2010 Employment Change	-1.7%
Average Monthly Wage	$7,035
Percent of Utah Total Average Wage	217.4%
Number of Private Firms	192
Share of Firms with more than 100 employees	5.0%
Public Sector	
Employment	2,192
Share of Total Public Employment	1.0%

Source: Utah Department of Workforce Services.

The utilities industry includes firms that provide power, natural gas, and water/sewage removal. When the Department of Workforce Services publish employment-related information at the "supersector" level (trade/transportation/utilities), the utilities industry receives a rather short shrift. After all, utilities—with fewer than 4,100 jobs statewide—accounts for less than 2 percent of total trade/transportation/utilities employment in Utah. In addition, another 2,200 utilities jobs also lie hidden in local government employment. These employees work for government-owned water, sewer and electric power entities.

Economists generally consider utilities "natural monopolies" or monopolies that have developed because a single firm can supply the good/service to the whole market at a lower cost than two or more firms. (Just think how expensive it would be to have three natural gas providers, each with their own transmission systems running to every city.) In the U.S., the government often regulates private utility firms or owns utilities outright in order to ensure they don't make "excessive" profits. However, the nature of the regulation process means that regulated firms may have little incentive to keep costs (including wages) down. This situation highlights why private-sector utilities show the highest average wage of any major industry in Utah—over $7,000 a month.

For more information about utilities in Utah, check out the Utah Division of Public Utilities web site: http://publicutilities.utah.gov/about.html

or the State of Utah Public Service Commission's web site: http://www.psc.state.ut.us/index.html

just the facts...

July 2011 Unemployment Rates		Changes From Last Year	
Utah Unemployment Rate	7.5 %	Down	0.1 points
U.S. Unemployment Rate	9.1 %	Down	0.4 points
Utah Nonfarm Jobs (000s)	1,200.6	Up	2.5 %
U.S. Nonfarm Jobs (000s)	130,920.0	Up	1.0 %
June 2011 Consumer Price Index Rates			
U.S. Consumer Price Index	225.7	Up	3.6%
U.S. Producer Price Index	191.6	Up	7.0%

Source: Utah Department of Workforce Services

June 2011 Seasonally Adjusted Unemployment Rates

Beaver	8.2 %
Box Elder	9.3 %
Cache	5.2 %
Carbon	7.4 %
Daggett	6.7 %
Davis	6.9 %
Duchesne	5.8 %
Emery	8.1 %
Garfield	12.0 %
Grand	11.3 %
Iron	9.0 %
Juab	10.7 %
Kane	8.1 %
Millard	5.6 %
Morgan	5.9 %
Piute	7.4 %
Rich	5.9 %
Salt Lake	7.3 %
San Juan	12.5 %
Sanpete	9.2 %
Sevier	8.1 %
Summit	6.6 %
Tooele	7.9 %
Uintah	5.5 %
Utah	7.4 %
Wasatch	8.8 %
Washington	9.6 %
Wayne	11.1 %
Weber	8.5 %

Watch for these features in our

Next Issue:

Theme:
Profiling the Recession's Unemployed in Utah

Highlighted Industry:
Construction

Occupation:
Construction

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TRAINING
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for

Green Careers

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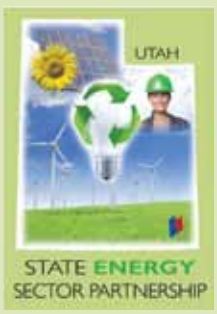
jobs.utah.gov

click on the State Energy Sector Partnership Grant link:



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